TOM ROLANDUS HAGEDOORN

SENIOR DATA SCIENTIST

37 Ramsgate Av Sydney, NSW | +61450553228 | tomrolandus@gmail.com

PROFILE SUMMARY

Highly skilled Data Scientist with a proven track record in algorithm implementation and optimization, seeking to leverage my expertise in a software engineering role focused on machine intelligence.

I bring four years of experience applying Python to solve complex problems across diverse industries. My strong analytical skills, coupled with a passion for clear communication, allow me to bridge the gap between technical solutions and business needs. I am eager to continue leveraging my MSc and BSc in Data Science and AI, along with my research contributions, to further contribute to the development of cutting-edge machine intelligence solutions.

KEY SKILLS

Data Visualisation	Machine Learning	Python – Pandas, Numpy
Generative AI – LLM	Java	SQL
Statistical Analysis	Stakeholder Management	Cloud Infrastructure

WORK EXPERIENCE

Deloitte   2024 - Now
Senior Data Scientist – GenAI, Sydney

- M&A Due Diligence Automation Tool: Spearheaded the development of an LLM RAG tool to automate and streamline the M&A due diligence process, drastically improving efficiency and accuracy. This initiative showcases my ability to lead technical projects from conception to deployment, leveraging cutting-edge AI technologies to solve complex business challenges.
- RACM Tool: Successfully managed the development and implementation of a robust Risk and Control Management (RACM) tool built by another team, ensuring proactive risk identification and mitigation, contributing to effective risk management practices. This demonstrates my experience in project management and cross-team collaboration to deliver critical tools that support the organization's compliance and risk management objectives.

Key Skills and Responsibilities

- Product/System Development: Designed and implemented core functionalities for the M&A Due Diligence tool, showcasing proficiency in writing production-ready code and leading development efforts. Additionally, I successfully managed the development of the RACM tool, ensuring its alignment with business requirements and timely delivery.
- Technical Design & Collaboration: Actively participated in design reviews, presenting technical solutions and collaborating with cross-functional teams to select optimal technologies and approaches, demonstrating my ability to influence technical decisions and foster collaboration.
- Code Review & Quality Assurance: Conducted thorough code reviews, providing constructive feedback to colleagues, ensuring adherence to best practices and maintaining high code quality standards, highlighting my commitment to mentorship and code quality.

Open Insurance   2022 – 2024
  Senior Data Scientist, Sydney
- Churn Prediction: Led the development and implementation of machine learning models in a Snowflake environment to proactively identify at-risk customers. This empowered targeted retention strategies, significantly reducing churn.
- Dynamic Pricing: Spearheaded the creation of a machine learning-based dynamic pricing engine, enabling real-time price adjustments based on customer behavior, demand, and competition. This optimized pricing for increased revenue and profitability.

Additional Contributions
- New Client Acquisition: Built machine learning models to identify high-potential prospects, improving targeted marketing and lead conversion.
- KPI Development: Led the establishment of KPIs across the business, analyzing key metrics to track performance and drive data-driven improvements.
- Data Visualization: Created interactive dashboards to provide stakeholders with actionable insights, facilitating informed decision-making.

Deloitte   2020 – 2021
 Senior Data Scientist, Brussels
- **Deloitte aiStudio**
  - Implementation of a Temporal Convolutional Network model using Python.
- **Anti-Money Laundering Project – Large Belgian Bank**
  - Managed and executed complex data extraction tasks using SQL and SAS, catering to various data analytics needs across projects.
  - Designed and developed a Python prototype for an advanced 'Know Your Customer' tool for potential fraud detection, to improve the banks's customer verification process and ensuring compliance with regulatory standards.
- **Asset Management – Belgian Water Provider:**
  - Implemented a comprehensive Asset Risk Management tool aimed at optimising the Belgian water provider's infrastructure management.
  - This initiative was instrumental in improving the efficiency of asset maintenance, reducing operational risks, and ensuring the consistent and reliable delivery of water services.
- **Credit Risk Modeling – Large UK-based Bank**
  - Managed data extraction for developing Loss Given Default (LGD) and Exposure at Default (EAD) models integral to the bank's credit risk assessment framework.
  - The role involved handling complex datasets and delivering them in a format suitable for modeling.

Eurecat   2018 – 2019
 Data Scientist Intern, Barcelona
- Participated in the European Smooth Project through the development of a Data module dedicated to enhancing data privacy. I implemented algorithms for data anonymization and re-identification risk evaluation, ensuring compliance GDPR and safeguarding sensitive information.
- Designed and developed an interactive dashboard using Java and JavaScript, integrating Rest API and React JS frameworks. This task included writing clean, efficient code and conducting rigorous testing to ensure robust functionality and user-friendly navigation.
- Collaborated closely with cross-functional teams, including data analysts and doctoral candidates, to develop a comprehensive solution that met both technical and user experience requirements. This collaboration facilitated the seamless integration of the data module with existing systems, enhancing overall data management capabilities.

EDUCATION

MSc Foundations of Data Science   2018 –2019

University Barcelona, Barcelona

As part of the European Smooth Project, I completed my Master thesis titled "X2R2: a tool for explainable and explorative reidentification risk analysis". The research explored the implementation of a data privacy tool for guiding users in the process of de-identifying their datasets and analysing the re-identification.

The thesis was published at VLDB 2020 – **Link**

BSc Data Science & Knowledge Engineering   2014 –2017

University of Maastricht, Maastricht

As part of the degree, I wrote a thesis titled "Massive Open Online Courses Temporal Profiling for Dropout Prediction". The research was aimed at predicting dropout rates in Massive Open Online Courses (MOOCs) through machine learning.

The thesis was published at ICTAI 2017 – **Link**

ADDITIONAL SKILLS

Languages

French (native), Dutch (native), English (fluent), Spanish (Intermediate), German (Beginner)

Programming Languages
- Advanced Python, including: Scipy, Scikit-learn, PyTorch, Langchain
- Advanced SQL.
- Advanced Java.
- Proficient in JavaScript.
- Advanced knowledge of R.

IT Skills
- Proficient developing with LLMs (RAG, finetuning, validation, prompt engineering)
- Proficient with Docker containers, Git CI/CD.
- Expert user of Tableau.
- Advanced knowledge of Snowflake.
- Advanced knowledge of cloud infrastructure (AWS)
- Confident user of workflow management tools.
- Experienced with Natural Language Processing.
- Experienced with Neural Networks, Artificial Neural Networks.